Small Business Innovation Research/Small Business Tech Transfer

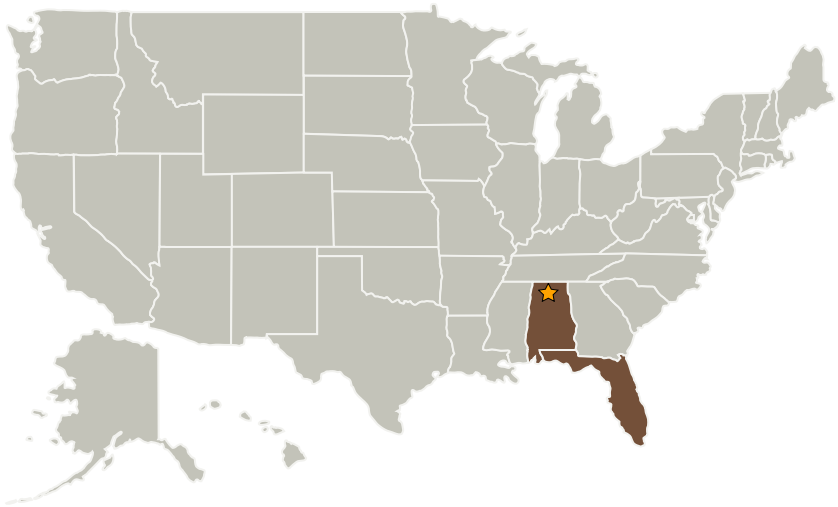
A Low Cost Light Weight Polymer Derived Ceramic Telescope Mirror, Phase I

Completed Technology Project (2009 - 2009)

Project Introduction

The primary purpose of this proposal is to develop and demonstrate a new technology for manufacturing an ultra-low-cost precision optical telescope mirror which can be scaled up for use in very large UV/optical and/or infrared telescopes. The Phase 1 deliverable will be a 0.25 meter precision mirror. Its optical performance assessment and all data on the processing and properties of its substrate material will be determined. The unique manufacturing processes employed allow for integration of mirror and support features, significantly increasing both cost reduction and quality improvement potential.

Primary U.S. Work Locations and Key Partners



Organizations Performing Work	Role	Type	Location
★Marshall Space Flight Center(MSFC)	Lead Organization	NASA Center	Huntsville, Alabama
United Materials and Systems	Supporting Organization	Industry	Orlando, Florida

Primary U.S. Work Locations	
Alabama	Florida

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Organizational Responsibility

Responsible Mission Directorate:

Space Technology Mission Directorate (STMD)

Lead Center / Facility:

Marshall Space Flight Center (MSFC)

Responsible Program:

Small Business Innovation Research/Small Business Tech Transfer

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Project Management

Program Director:

Jason L Kessler

Program Manager:

Carlos Torrez

Technology Areas

Primary:

- TX08 Sensors and Instruments
  - TX08.2 Observatories
    - TX08.2.1 Mirror Systems